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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/516,710

12/03/2004

Nobuaki Ishii

Q70519

6748

23373 7590 02/28/2007
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EXAMINER

LE, HOA T

ART UNIT

PAPER NUMBER

1773

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/28/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/516,710

Applicant(s)

ISHII ET AL.

Examiner

H. T. Le

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August & 13 November 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 27-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

2. Claims 27-30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention for reasons stated in previous office actions.

Claim Rejections - 35 USC § 102

3. Claims 1-26 are rejected under 35 U.S.C. 102(b) as being anticipated by WO-Ishii patent (WO 02/22098) or US-Ishii patent (US 6,500,415).

Claims 1-4: Both WO-Ishii and US-Ishii patents teach silica-coated zinc oxide particles having particle size from 0.01 to 0.2 μm , indicating that particles over 5 μm would be less than 0.1 wt%; the surface of the coated particles are further treated with hydrophobicity-imparting agent including silicon oils, silanes and fatty acid salts; and the silica coating thickness is from 0.1 to 100 nm. See WO-Ishii patent, page 29, lines 3-21; page 32, lines 8-21; and page 46, line 22 to page 48, line 9, "Production example 4"; or US-Ishii patent, col. 8, line 55 to col. 9, line 5; col. 9, lines 47-61; and col. 15, line 30 to col. 16, line 15. The silica-coated particles are further classified by dry process including jet-milling or rotary milling. See WO-Ishii, page 27, lines 7-15 or US-Ishii, col. 8, lines 16-23.

Claims 5-6: See WO-Ishii patent, page 29 or US-Ishii patent, col. 8, line 55 to col. 9, line 2.

Claims 7-11: See WO-Ishii, claims 13-15 or US-Ishii, col. 9, lines 8-33; claims 7 and 9-11; and Tables 1-3.

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Claims 12-19: See WO-Ishii, examples 8-10 (Table 7, page 62); or US-Ishii, col. 11, lines 17-27 and col. 14, lines 36-40.

Claims 20-26: See WO-Ishii, claims 1-3 and 21-22; or US-Ishii, examples 5-20 and claims.

Claim Rejections - 35 USC § 103

4. Claims 20-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over the WO- Ishii patent (WO 02/22098) or US-Ishii patent (US 6,500,415) in view of the Takeshi patent (JP 2000-319,128).

The Ishii patents teach the claimed invention as discussed above. Takeshi teaches utilization of silica-coated zinc oxide fine particles in various resin composition for from adhesives to molded materials. See Takeshi, paragraph [0020]. It would have been obvious for one having ordinary skill in the art to employ silica-coated zinc oxide particles as taught by Ishii in resin compositions as taught by Takeshi because Takeshi states that the high UV shielding effect and photo-catalytic activity of silica-coated zinc oxide particles make them ideal as fillers or plasticizers in resin and molding compositions.

Response to Arguments

5. Applicant argues that the Ishii patents fail to teach “dry-format classifier” because jet mill is a pulverizer and not a classifier. Note that “classification” is defined in the present specification as “reducing of large particles”. See instant specification, page 19, lines 1-3. Jet-milling as taught in the Ishii patents is to reduce aggregates which are large particles (see WO-Ishii, page 27, lines 8-15 and US-Ishii, col. 8, lines 15-23). Therefore, the jet-milling process as taught by the Ishii patents is a classification process, and just the jet-mill tool

meets the claim limitation “dry-format classifier”. In addition, Applicant also recognizes that jet-milling is “effective for reducing the level of aggregation of particles.” See instant specification, page 19, lines 6-8.

6. In the response filed August 2006, Applicant argued that jet-milling causes breakage of the silica coating or creates new surfaces and thus the product as claimed is different from the product taught by either of the Ishii patents. The Ishii patents emphasize that the dense coating of silica “is not broken” after jet milling. See WO-Ishii, page 27, lines 8-15; or US-Ishii, col. 8, lines 16-23. Therefore, the resultant products taught by these Ishii patents possess the same structure as the claimed product, namely zinc oxide particles coated with a silica coating wherein the coating is not broken.

7. In the August response, Applicant further argued that a product resulted from “dry-format classification” is different from a product resulted from jet milling citing that “Example 1 of the present invention is directly comparable to Comparative 6”. However, the dry-format classification described in Example 1 is by jet milling (page 44, lines 26-28). Similarly, silica-coated particles in examples 2-4 are produced according to the process described in Example 1. Thus, Examples 1-4, which are claimed to be prepared according to the claimed invention, are directly contradictory to Applicant’s assertion that jet-milling is not a dry-format classification.

8. Applicant's arguments filed August 10 and November 13, 2006 have been fully considered but they are not persuasive for the reasons set forth above.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. T. Le whose telephone number is 571-272-1511. The examiner can normally be reached on 10:00 a.m. to 6:30 p.m., Mondays to Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



H. T. Le
Primary Examiner
Art Unit 1773

February 13, 2007